

the operation and practical uses of the specific invention (the aforesaid blast-gun and its modified versions), the embodiments in figures 1, 2, 7, 8, and 9 are for that purpose disclosed in this application, pertaining all these embodiments, notwithstanding, to the same method of fire-fighting conformed by the system (method and apparatus) of this invention.

On the grounds of 37 CFR 1.146, "...restriction of the claims to no more than a reasonable number of species". Which is this "reasonable" number of species.

Does a (allowed) modified version (presented in a separate drawing) constitute itself a distinct species or sub-species. Do different embodiments disclosed only to demonstrate or explain the practical uses and operational capabilities of the invention, constitute, every one, a distinct species.

This is.

According to the contents of this Office Communication paper.

Figure 3A (and respective plan view in figure 3B), figure 4A (and respective plan view in figure 4B), figure 5A (and respective plan view in figure 5B), and figure 6, correspond solely to the allowed "Modified Versions" of construction of the (same) invention (the blast-gun in last figure 10A), versions that "...must be shown in separate views" (37 CFR 1.84(5)).

All the afore mentioned figures, show different embodiments for the same invention (the process in the "blast-gun"), progressively including different modified geometrical forms or accessories for operational needs, where, up to last figure 10A, which finally includes and describes all the complete characteristics of the method or process for this flames suppression and containment system.

Although the components and geometrical characteristics of the several modified forms presented for the blast-gun (figs. 3A, 4A, 5A, and 6) are qualitatively different, the process or method in each and all of them, pertains or is included in the complete process specifically described for the blast-gun in last figure 10A, and those figures only describe geometrical or operational differences (i.e. with or without external fire-fight agent injection, with horizontal or with angled flames containment jets, with 2, 4, or circumferential jets, with convergent-divergent or straight jacket duct), been all these, pure operational or geometrically qualitative modified forms with respect to the blast-gun in said figure 10A, the steps comprising the process, been the same.

Specifically. According to the steps this process or method comprises, only this figure 10A could have been included, or is actually needed, in all this patent application to describe completely such all steps, the differences presented correspond to the operation point or to a geometric configuration needed for a particular fire site physical or burning material characteristics.

On the other hand.

Since the presentation or inclusion in this application of the detailed description and figures of only the "blast-gun" components and process in this figure 10A (or the other figures for the blast-gun), would have been considered incomplete for the analysis of this application and the understanding of this invention, additional figures (figs. 1, 2, 7, 8, 9) were presented only to explain and demonstrate how and where this blast-gun can be installed, operated, and practically used for fire-fight activities.

Figures 1, 2, 7, 8, and 9, represent solely different embodiments for the practical uses where the most complete version of the "blast-gun" (in figure 10A) can be connected to (in any of those cases) and operated, depending on the flames site physical and burning materials characteristics as depicted.

Furthermore. Such embodiments presented for the practical uses of the blast-gun in figure 10A, are also only geometrically different embodiments (i.e. number of connection pipes, a long or a short fire fight boom, a big or small pneumatic cylinder, with a wheel or a pole support for the rest-point, with or without a deposit installed for water, or for foam, or for a powder external fire fight agent), the differences reside in the operational needs of this system in the fire site, the process again, for the fire fight work, is the same, originated only in said blast-gun depicted in figure 10A.

As disclosed, all these accessories in the embodiments for the practical uses and the blast-guns presented, are only "optionally" installed system's components, according to its operational needs, as they do not

modify the steps comprising the (complete) process and as they are related in operation and effect.

More evidence to this is: if in a fire-fight activity suppressing flames on a tree, the angle of the fire-fight boom depicted in figure 2 (species II), is decreased or lowered to the ground, one would get species I in figure 1, fire-fighting flames on grasslands (the blast-gun installed is the same in both figures, and the wheel (17a) and its accessories, could have been just also drawn or included or installed in that figure 2 embodiment). Figure 1 and figure 2 could have been merged in just one figure, reducing the number of species. And the same reasoning applies altogether to figures 1, 2, 7, 8, and 9 for also injecting and aspersing an external fire-fight agent. Just one big figure including every item disclosed, would have originated only one species.

Distributing all the components or total numbered parts of the complete invention, presenting different simplified drawings or figures for modified forms of construction and operation optionally installed components (instead of presenting a complete one drawing general embodiment for the invention), does not represent a creation of species and sub-species if the overall process is not modified.

I need to insist. The process for the blast-gun in figure 10A, is the same for all the embodiments and modified forms presented, only with operational or geometrical qualitative differences, and this same blast-gun can be installed in any of the embodiments shown (figs. 1, 2, 7, 8 and 9).

I admit this excess of figures and modified forms generated confusion and represented an unnecessary burden for the examiner, particularly because, the three independent (and respective dependent) claims originally presented, referred individually or are directed respectively, to the only three practical uses and operational capabilities disclosed for this system in all those figures.

Let me explain this.

The original claims listing, was planned or designed, to be directed to the following three operational points (one for each independent claim) for the complete process (method) comprising this invention:

Operating point A.

Extinguishing flames operating the system: with a flame-suppression air jet, with a thermal-insulation air jet, and with flame-containment air jets, which are all directed to the flames (i.e. no condensation shock wave, no liquid droplets, and no external fire-fight agent injection and aspersion).

(Steps included in independent claim number 1, comprising the process within the blast-gun for this operation point).

Respective dependent claims 2 to 7, are directed to the steps of providing all items disclosed in embodiments of figures 1 and 2, to perform efficiently the operational needs of the fire-fight activities as depicted in those figures [extinguishing flames on a flat horizontal surface (grasslands, foliage), or, in an elevated site (trees, coated wires, wooden roofs)].

Operating point B.

Extinguishing flames operating the system: with a flame-suppression air jet, with a thermal-insulation air jet, with flame-containment air jets, now, with a condensation shock-wave and water droplets (in said flame-suppression air jet), which are all directed to the flames (i.e. no external fire-fight agent injection and aspersion).

(Steps included in independent claim number 8, comprising the process within the blast-gun for this operation point).

Respective dependent claims 9 to 14, are directed to the steps of providing all items disclosed in embodiments of figures 1 and 2, to perform efficiently the operational needs of the fire-fight activities as depicted in those figures [extinguishing flames on a flat horizontal surface (grasslands, foliage), or, in an elevated site (trees, coated wires, wooden roofs)].

Operating point C.

Extinguishing flames operating the system: with a flame-suppression air jet, with a thermal-insulation air jet, with flame-containment air jets, with a condensation shock-wave and water droplets (in said flame-suppression air jet), and now, with the injection and aspersion of an external fire-fight agent (i.e. the complete process within the blast-gun for this fire-fight system).

(Steps included in independent claim number 15 (intended to be a generic claim), comprising the complete process within the blast-gun (in fig. 10A) for this generic all-purpose operation point).

Respective dependent claims 16 to 20, are directed to the steps of providing all the items disclosed in embodiments of figures 1 and 2, plus a fire-fight agent deposit and injection accessories as disclosed in embodiments of figures 7, 8, and 9, to perform efficiently the operational needs of the fire-fight activities as depicted again in those figures 1 and 2 [extinguishing flames on a flat horizontal surface (grasslands, foliage), or, in an elevated site (trees, coated wires, wooden roofs)].

All these different operating points for the fire-fight system of this invention, only actually mean, the opening or closing of the provided valves for air or fire-fight agent flow regulation, the connection of a different number of extension pipes for the size of the fire-fight boom assembly, the installation of a wheel or a pole support for rest point, the re-loading of a different fire-fight agent, or the different physical flame sites situations where this fire-fight system can be operated and used.

With this fore planning for the implementation of every independent claim (and respective dependent claims), all these original claims presented, should represent or include a reasonable (allowed) number of distinct species (regardless of the number of figures, of the modified versions presented, and of the distribution of the items on them), and no independent inventions, because the embodiments presented are connected in design, operation, and effect under the disclosure and as claimed.

Neither as disclosed, all these modified versions described for the blast-gun and all these embodiments described for the practical uses, should represent, patentably distinct species, because although, they could be additionally combined in more figures (generating more species or sub-species), they would actually remain as (allowed) modified versions of the same invention, all presented (for clarity, in several individual and simplified figures) only to demonstrate different practical uses and operational capabilities of the system (the overall process for the system disclosed, is the same).

I believe, is this excess of figures who creates the impression of so many patentably distinct species and sub-species, not the claims themselves in the original listing (i.e. every species and sub-species mentioned in this office action paper, is related to a figure, not to a claim).

It is important to indicate, that, all the physical characteristics for the process of this fire fight system, can be included or grouped together in only two figures, further detailed and much more elaborated, presenting no differences with respect to the items included in all the original figures (i.e. one embodiment for the complete blast-gun, and one complete very complicated and elaborated embodiment for a all-purpose practical use). So, If the figures are reduced to only two detailed figures, so are reduced the patentably distinct species and sub-species of the claimed invention to a reasonable allowed number and no requirement for election-restriction would have been issued (is then just a matter of how detailed, elaborated,

and complicated are the (minimum) drawings presented. This is an intangible subjective matter).

I admit also then, that only, figure 10A and a complete much more elaborated and complicated figure 2 incorporating and distributing therein all the remaining left-over items of figures 1, 7, 8 and 9 (i.e. incorporating therein the wheel, its support, the small pneumatic cylinder, a single fire-fight agent deposit with all the needed accessories, the appended pipe line, and the additional hose and valve for the external injection and aspersion of a general fire fight agent), would have been truthfully the only two figures actually needed to describe this invention completely including all its operational needs, since any other modified version (geometrical), or modification (operational), or any improvement thereafter, obvious to those skilled in the art, would be considered anyhow part of the true spirit and scope of this invention described in just those two drawings.

To give a last emphasis on all this. The purpose or effect of this invention, is not one specifically related, to a fluids handling and dispensing operation by itself or as the objective of the process involved, using thereby different not connected methods or inclusively independent inventions, as could have been understood; the specific effect of this invention is the only one of extinguishing flames on different fire sites scenarios and with a patentable method.

Finally.

According to these species and sub-species classification rules (involving eventually independent and/or distinct inventions), one person of the public cannot patent (in just one utility patent application) a "system" consisting of geometrically different physical accessories but related in design (under only one complete or overall process), used or installed depending on a range of related operational needs and effects, to implement a practical task with one and only specific objective (fire fight, in this case).

Generic claims are dangerous, unstable, difficult to implement and design, not always understood by the examiner, and can bring a lot of troubles for the public and also complicated appeal and litigious activities for an inventor (even if they are finally allowed and the patent is granted).

In the present case, the number of combinations formed, with every one of these 5 species indicated in this office action paper, taken with every one of the 5 sub-species mentioned, would result in the factorial or combinatorial number of patent applications needed to file for this complete system, in order to prevent, just any of the geometrically or operational modified forms disclosed, to be filed by another person of the public, as an improvement to the patent of this very same system, even before its expiration date.

So. As to the limit of my understanding, I am not able to present any more specific points favorable to my patent application defense, I herein indicate specifically as the election of the invention presented for

prosecution, consonant with this requirement, the single sub-species V (Figures 10A and plan view 10B) (the complete process therein), which is actually the specific invention presented in this application regardless of the modified versions, practical uses, and operational capabilities disclosed.

Attached is the (new) claims listing which replaces the prior version of all the (20) claims (canceled). (pages: 40 to 47) (8 sheets).

New independent claim 21, is a generic claim, directed to all the steps comprising the process within the complete version of the blast-gun (figure 10A), when installed and operated, on an embodiment providing all items needed for a all-purpose practical use configuration including all the operational needs as already disclosed.

RESPECTFULLY.

Armando Celorio-Villasenor.
Inventor name.

Mexico City. July 29, 2005

Signature :

A handwritten signature in black ink, appearing to be 'ACV', written over a horizontal line.

ACV/acv